A NEW SIX-EYED PHOLCID SPIDER (ARANEAE, PHOLCIDAE) FROM KARST TIANKENG OF LEYE COUNTY, GUANGXI, CHINA

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Abstract Belisana zhangi sp. nov., a new six-eyed pholcid spider from Guangxi, China, is described and illustrated. The new species is a slightly troglomorphic species, with a pale white body color and unusually long legs, but with eyes of normal size. The type specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences in Beijing (IZCAS).

Key words Belisana, new species, Tiankeng, Guangxi, China.

For more than 100 years, the genus Belisana had been monotypic, with the type species B. tauricornis from Myanmar as single described representative. Deeleman-Reinhold (1986) reported on a collection of 28 morphospecies ranging from Sri Lanka to Queensland, but only in 2001, a second species (from Australia) was described (Huber, 2001). Recently, more than 50 new species from Southeast Asia were described and nine species were transferred from Spermophora to Belisana by Huber (2005), and Zhang et al. (2006) described two new species from Tibet, China. Currently, a total of 66 species are included in Belisana, eight of which occur in China (Platnick, 2007; Song et al., 1999).

Karst Tiankeng, also known as "Heavenly Pit", is a very unique geological formation of karst caves throughout Southwestern China. Leye County of Baise City, located in the northwestern part of Guangxi Province and about 320 km from the famous tourist city Guilin, has the world-famous karst landscapes with magnificent and broad Tiankeng, among which 26 "heavenly pits" in Dashiwei Tiankeng are generally viewed as world top spots for their concentration, vastness and uniqueness. In Apr. 2001, a team with many scientists visited this area and collected some specimens, including the six-eyed pholcid spider described in this paper.

Taxonomic descriptions and terminology follow Huber (2000, 2005). The following abbreviations are used in the illustrations: ba = bulbal apophysis; e = embolus; ep = epigynal pocket; f = membranous flap on procursus; pr = procursus; used in the text: ALE = anterior lateral eyes; AME = anterior median eyes; PME = posterior median eyes.

The specimens studied here are deposited in the Institute of Zoology, Chinese Academy of Sciences in Beijing (IZCAS).

Pholcidae C. L. Koch, 1850

Belisana Thorell, 1898

Belisana Thorell , 1898: 278; Simon , 1903: 988; Simon , 1909: 81; Deeleman-Reinhold , 1986: 46-48; Huber , 2001: 124-126; Huber , 2005: 1-126. Type species: Belisana tauricornis Thorell , 1898.

Belisana zhangi sp. nov. (Figs. 1-6)

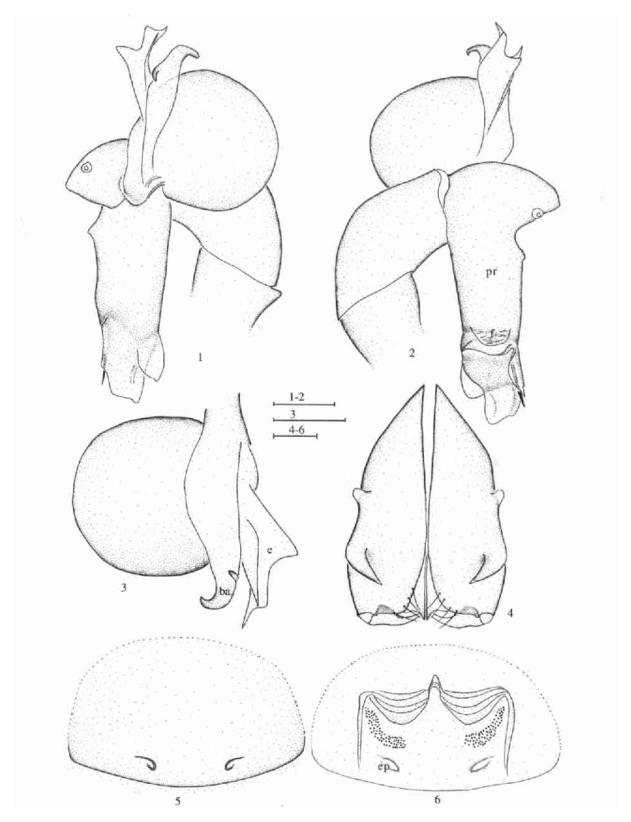
Description. Male (holotype). Total length 2.25 (2.3 with clypeus), carapace width 0.9. Leg : 30.3 (7.68 + 0.4 + 7.65 + 13.06 + 1.51), tibia : 4.85. : 2.88, tibia : 4.12; tibia 95. Carapace whitish yellow, with yellow radial striae on posterior half; chelicerae yellowish; sternum white. Legs whitish, without darker rings. Opisthosoma whitish yellow, without any spots. Ocular area not elevated, thoracic furrow absent; distance PME-PME 0.12; diameter PME 0.11; distance PME-ALE 0.03; AME absent. Sternum slightly wider than long (0.65/0.56). Chelicerae as in Fig. 4, with pair of curved apophyses, tips 0.2 apart. Palps as in Figs. 1-3 (left palp and right palpal trochanter and femur lost); procursus simple, only distally slightly more complex, with ventral membranous flap, bulb with hooked apophysis and membranous embolus with complex tip. Retrolateral trichobothrium of tibia at 7 %; legs without spines, vertical hairs, and curved hairs; tarsus apparently with about 20 distinct pseudosegments.

Female (paratype). In general similar to male, but leg shorter, striae on posterior carapace indistinct. Leg : 20.05 (5.06+0.31+5.12+7.69+1.87), tibia : 3.12, tibia : 2.25, tibia : 3.25. Epigynum nearly white in color, simple and flat externally, with internal structures nearly invisible through cuticle (Fig. 5), pockets 0.16 apart. Dorsal view as in Fig. 6.

Variation. Tibia in another female: 5.56.

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Figs. 1-6. Belisana zhangi sp. nov. 1. Male right palp , prolateral view. 2. Male right palp , retrolateral view. 3. Male bulb with bulbal apophysis and embolus , lateral view. 4. Male chelicerae , frontal view. 5. Epigynum , ventral view. 6. Cleared epigynum , dorsal view. Scale bars = 0.1 mm.

Holotype , China , Guangxi , Leye County (24.7 $\mbox{\it N}$, 106.6 $\mbox{\it E}$) , Tiankeng , 9 Apr. 2001 , collected by Prof. ZHANG Chun-Guang. Paratypes 2 , same data as holotype.

Diagnosis. The new species can be easily distinguished from other known species by the following characters: long legs, shapes of male procursus, bulbal projections and cheliceral apophyses.

Etymology. Named for the collector, Professor ZHANG Chun-Guang, an ichthyologist in IZCAS.

REFERENCES

- Deeleman-Reinhold, C. L. 1986. Leaf-dwelling Pholcidae in Indo-Australian rain forests. Proceedings of the Ninth International Congress of Arachnology (Panama, 1983): 46-48.
- Huber, B. A. 2000. New World pholcid spiders (Araneae: Pholcidae): A revision at generic level. Bulletin of the American Museum of Natural History, 254: 1-348.
- Huber, B. A. 2001. The pholcids of Australia (Araneae; Pholcidae): taxonomy, biogeography, and relationships. Bulletin of the American Museum of Natural History, 260: 1-144.
- Huber, B. A. 2005. High species diversity, male-female coevolution, and metaphyly in southeast Asian pholcid spiders: the case of Belisana Thorell 1898 (Araneae, Pholcidae). Zoologica, 155: 1-126.

- Platnick, N. I. 2007. The world spider catalog, version 7.5. American Museum of Natural History, online at http://research.amnh.org/entomology/spiders/catalog/index (accessed 20 March 2007).
- Simon , E. 1903. Histoire Naturelle des Araign és. Librairie Encyclop édique de Roret , Paris , 2e edition , 2 (4): 669-1080.
- Simon, E. 1909. Étude sur les Arachnides du Tonkin (1 è partie). Bulletin Scientifique de la France et de la Belgique, 42: 69-147.
- Song , D- X , Zhu , M-S and Chen , J 1999. The Spiders of China . Hebei Science and Technology Publishing House , Shijiazhuang . 640 pp .
- Thorell , T. 1898. Viaggio di Leonardo Fea in Birmania e regioni vicine. LXXX. Secondo saggio sui Ragni birmani. . Retitelariae et Orbitelariae. Annali del Museo Civico di Storia Naturale di Genova , 39 : 271-378
- Zhang, F, Zhu, M-S and Song, D-X 2006. A review of pholcid spiders from Tibet, China (Araneae, Pholcidae). Journal of Arachnology, 34: 194-205.

中国广西贝尔蛛属一新种记述 (蜘蛛目, 幽灵蛛科)

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摘 要 记述了中国幽灵蛛科贝尔蛛属 1 新种: 张氏贝尔蛛 Belisana zhangi sp. nov.。新种种名依照采集者、鱼类学家张春光教授的姓氏命名。模式标本保存于中国科学院动物研究所, 北京。

张氏贝尔蛛, 新种 Belisana zhangi sp. nov. (图 1~6)

关键词 贝尔蛛属,新种,天坑,广西,中国. 中图分类号 Q959.226 正模 ,广西乐业县天坑,2001年4月9日,张春光采; 副模2 .采集数据同正模。

根据新种第1步足的长度、雄性跗前突的形状、生殖球 突起以及螯肢突起的形状等,可与本属其它已知种类区别。